



RESPONSE UNDER 37 C.F.R. 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 3661

PATENT
PD-99-25

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: WALTER GELON ET AL. : Date: June 14, 2001
Serial No.: 09/328,911 :
Filed: June 9, 1999 : Group Art Unit: 3661
For: PRACTICAL ORBIT RAISING SYSTEM AND :
METHOD FOR GEOSYNCHRONOUS SATELLITES : Examiner: Brian J. Broadhead

AMENDMENT AFTER FINAL REJECTION

Commissioner of Patents and Trademarks
Washington, D. C. 20231

Sir:

In response to the Office Action mailed April 11, 2001, please amend the above-identified patent application as follows.

IN THE CLAIMS:

Please amend the following Claims to read as follows.

1. A method for raising a spacecraft launched into a transfer orbit about the Earth from the transfer orbit to a geosynchronous orbit, comprising the steps of:

launching a spacecraft having chemical and electric propulsion thrusters and a solar array;

firing the chemical propulsion thrusters at apogees of intermediate orbits, starting from the transfer orbit initiated by the launch vehicle to successively raise perigees of the orbit until the spacecraft perigee substantially clears the Van Allen radiation belts, and where the semi-major axis of the intermediate orbit is substantially less than the semi-major axis of [the] a final orbit, and where the inclination of the intermediate orbit is substantially greater than the

inclination of the final orbit;

firing the electric propulsion thrusters to raise the orbit of the spacecraft from the orbit achieved by the chemical propulsion thrusters firing step to near geosynchronous orbit by steering the thrust vector both in-plane and out-of-plane while rotating the spacecraft body and steering the solar array to maintain the sun's illumination on the solar array; and

firing selected ones of the chemical and electric propulsion thrusters to achieve final geosynchronous orbit.